

UNITED STATES SPECIFICATION

TO ALL WHOM IT MAY CONCERN:

BE IT KNOWN that I, Richard E. JAHN, a citizen of  
THE UNITED STATES OF AMERICA, having an address of 17  
Westfield Road, Coram, New York 11727 USA, have invented  
certain new and useful improvements in a

**LIGHTED MAILBOX**

of which the following is a specification.

## BACKGROUND OF THE INVENTION

### 1. Field of the Invention

The invention relates generally to an illumination system for a mailbox enclosure and in particular to an illumination system which illuminates an interior of a house-shaped mailbox enclosure having translucent windows which provide an aesthetically pleasing appearance without allowing observation of the contents of the mailbox enclosure.

### 2. The Prior Art

It is known in the art to provide a lighting system for illuminating the interior of a mailbox enclosure to facilitate the viewing of the contents of the mailbox enclosure in low light conditions. It is further known to provide transparent panels or windows on a mailbox enclosure with an interior light for remotely viewing the contents of the mailbox enclosure. Mailbox enclosures in combination with lighting systems are disclosed in U.S. Patent Nos. 6,629,634; 6,102,548; 6,033,084; 5,975,713; 5,813,749 and 4,755,915, the disclosures of which are incorporated herein by reference.

## SUMMARY OF THE INVENTION

The invention relates to a lighted mailbox

, comprising a house-shaped mailbox enclosure with a front portion, a rear portion, a roof portion and two or more side portions. A section of the mailbox enclosure is adapted to be opened and closed to provide access to its interior. A light source is located in and illuminates an interior of the mailbox enclosure and is electrically coupled to a power supply which provides energy to illuminate the light source. One or more translucent windows disposed on the mailbox enclosure transmit light when the light source is illuminated such that light is visible from outside the mailbox enclosure through the translucent windows but the interior and contents of the mailbox enclosure are not visible from the outside.

A photoelectric light sensor which controls the illumination of the light source according to the level of outside ambient light is preferably coupled to the light source and power supply. The power supply is preferably a rechargeable battery and a solar cell may be provided to charge the rechargeable battery. The photoelectric light sensor and solar cell are preferably disposed on the a roof portion of the mailbox enclosure.

The light source preferably includes an incandescent bulb, a neon bulb or an light emitting diode. Light source and/or power supply are preferably detachably secured to a housing located in an interior of the mailbox enclosure.

The translucent windows are preferably plastic or frosted glass. A switch may be provided which is adapted to illuminate the light source only when a section of the mailbox enclosure adapted to be opened and closed is in an open position.

One benefit of an embodiment of the invention is that an illumination system is provided which illuminates an interior of a house-shaped mailbox enclosure having translucent windows, thereby providing an aesthetically pleasing appearance without allowing outside observation of the contents of the mailbox enclosure.

Another benefit of an embodiment of the invention is that an illumination system is provided for a house-shaped mailbox enclosure with a photoelectric sensor for illuminating an interior of the mailbox enclosure automatically when a level of outside ambient light falls below a preset threshold level.

#### BRIEF DESCRIPTION OF THE DRAWINGS

These and other benefits and features of the present invention will become apparent from the following detailed description considered in connection with the accompanying drawings. It is to be understood, however, that the drawings

are designed as an illustration only and not as a definition of the limits of the invention.

In the drawings, wherein similar reference characters denote similar elements throughout the several views:

FIG. 1 shows a perspective view of an embodiment of a lighted mailbox according to the present invention;

FIG. 2 shows a side view of the embodiment of FIG. 1 with a portion shown in cut-away; and

FIG. 3 shows a schematic diagram of a circuit which may be used with an embodiment of a lighted mailbox according to the present invention .

#### DETAILED DESCRIPTION OF THE DRAWINGS

FIG. 1 shows house-shaped mailbox enclosure 1. House-shaped mailbox enclosure 1 has the general appearance of a house or other building and may be constructed from a rigid material such as plastic, wood or metal. Mailbox enclosure 1 may be secured to a pole or to a house or otherwise located to provide access to postal carriers and recipients.

House-shaped mailbox enclosure 1 includes a front

portion 2, a rear portion 3, at least two side portions 4, a roof portion 5 and a bottom portion (not shown).

Translucent windows 6 are disposed on house-shaped mailbox enclosure 1, simulating the windows on a house. As shown in FIG. 1 translucent windows 6 may be located on front portion 2, side portion 4 and/or roof portion 5 of house-shaped mailbox enclosure 1. Additionally, translucent windows 6 may be disposed on rear portion 3.

Translucent windows 6 are comprised of a material which transmits light to a degree such that light from an illumination source disposed inside mailbox enclosure 1 is visible from outside of mailbox enclosure 1 but an interior of mailbox enclosure 1 is not visible from outside through translucent windows 6. For example, translucent windows 6 may include plastic, frosted glass or any other suitable semi-transparent material.

A solar cell 7 may be disposed on house-shaped mailbox enclosure 1. As shown in FIG. 1 and 2, solar cell 7 is preferably disposed on roof portion 5 of house-shaped mailbox enclosure 1. A photoelectric light sensor 8 may also be disposed on house-shaped mailbox enclosure 1, preferably on roof portion 5.

A power supply 9 and a light source 10 are disposed on an interior of house-shaped mailbox enclosure 1, as shown in the cut-away portion of FIG. 2. Power supply 9 provides energy to illuminate light source 10. Power supply 9 may comprise, for example, a rechargeable battery. An additional back-up battery may also be provided for powering light source 10 if a primary battery runs down.

Light source 10 may comprise, for example, an incandescent light bulb, a neon light bulb or a light emitting diode. When illuminated, light source 10 may provide visible light in an interior of house-shaped mailbox enclosure 1 to assist in viewing the contents thereof during hours of darkness or when ambient conditions are otherwise darkened. Light from light source 10 is transmitted through translucent windows 6, providing a pleasing aesthetic appearance to house-shaped mailbox enclosure 1.

In this way light source 10 in combination with translucent windows 6 provide an appealing aesthetic appearance when a lighted mailbox according to an embodiment of the present invention is viewed from outside, while maintaining a degree of privacy and security by preventing persons from observing the contents or lack thereof of the mailbox enclosure from outside. Light source 10 in combination with translucent windows 6 also provide a sense of

security and safety when retrieving mail or other contents of mailbox enclosure 1 during hours of darkness.

Power supply 9 and/or light source 10 may be detachably secured to a housing 11 which is secured to an interior of house-shaped mailbox enclosure 1. Both power supply 9 and light source 10 are configured to be easily accessed and removed for repair or replacement.

A portion of house-shaped mailbox enclosure 1 is adapted to be opened and closed, thereby providing access to an interior of mailbox enclosure 1 by postal carriers and recipients. As shown in FIG. 2, for example, front portion 2 of house-shaped mailbox enclosure 1 may be swung open and closed, permitting access to an interior of the mailbox enclosure. Hinges, slides, latches and other mechanical means known in the art may be used for detachably securing front portion 2 to mailbox enclosure 1. A switch 13, for example a pin switch or a tilt switch, may be provided which is electrically coupled to power supply 9 and light source 10 such that light source 10 is illuminated only when front portion 2 is in an open position

FIG. 3 is a schematic diagram of a circuit which may be used with house-shaped mailbox enclosure 1. The circuit includes solar cell 7 which is electrically coupled to power



supply 9. Power supply 9 may comprise, for example, a rechargeable battery. The circuit shown schematically in FIG. 3 also includes photoelectric light sensor 8 and light source 10. Solar cell 7 uses light energy accumulated during daylight hours to charge power supply 9.

Photoelectric light sensor 8 interrupts a flow of energy to light source 10 such that light source 10 is not illuminated when a level of outside ambient light detected is above a determined level. For example, photoelectric light sensor 8 may interrupt a flow of current to light source 10 during daylight hours. Additionally, photoelectric light sensor 8 allows energy to flow to light source 10 when a level of outside ambient light is below a determined level, thus illuminating light source 10. For example, photoelectric light sensor 8 may cause illumination of light source 10 during nighttime hours. Additionally, manual override switch 12, shown in FIG. 2, may be provided which bypasses photoelectric light sensor 8 and permits manual control of illumination of light source 10

Accordingly, while several embodiments of the present invention have been shown and described, it is obvious that many changes and modifications may be made thereunto without departing from the spirit and scope of the invention.